the control device includes an arrangement for detecting the descent of the vehicle; and

the descent of the vehicle is only detected if a tilt sensor supplies a signal indicating the descent.

REMARKS

I. INTRODUCTION

Claims 1 to 10 are pending. The Office Action rejected claims 1, 2, and 8 under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 5,594,735 to Sigl (Sigl). The Examiner has indicated that claims 3-7 and 9-10 contain allowable subject matter. In response, claims 3-5, 9 and 10 have been rewritten in independent form to include the limitations of the base claim and any intervening claims. Claims 6 and 7 depend from allowable claim 5. Attached hereto is a marked-up version of the amendments showing the changes made to claims 3-5, 9 and 10, captioned "Amendment Version With Markings." Applicants respectfully request entry of the amendments since they comply with the Examiner's request, raise no new issues, and put the claims in condition for allowance. It is respectfully submitted that all of the presently pending claims are allowable, and reconsideration of the present application is requested for at least the following reasons.

II. THE 35 U.S.C. § 103(a) REJECTION SHOULD BE WITHDRAWN

The Examiner has rejected claims 1, 2 and 8 under 35 U.S.C. § 103(a) as being obvious over Sigl. To establish obviousness of a claim under 35 U.S.C. § 103(a) the Office must demonstrate that *all the claim limitations* are *taught or suggested* by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). Further, "[a]ll words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

The rejection of independent claim 1 should be withdrawn because Sigl, the only prior art cited in the Office Action, does not teach or suggest all the claim limitations of claim 1. Claim 1 recites "[a] method for controlling a vehicle comprising . . . *detecting whether the vehicle is traveling on a descent.*" (Emphasis added). It should be noted that "detecting" necessarily involves affirmative **monitoring** and **recognition** of an occurrence of

a condition, **not merely the occurrence of a condition**. In contrast to the claimed invention, the Sigl reference merely mentions an occurrence of a vehicle traveling on a descent, but simply does not *detect* whether the vehicle is traveling on a descent. The sections of Sigl cited in the Office Action as teaching **detection** of a descent instead merely indicate that "it is only in a few operating states, *such as* when driving on downhill grades, that the adjusted speed is exceeded." (Col. 3, lines 21 to 23; emphasis added). Accordingly, the Sigl reference merely lists a downhill grade as an *example* of a situation in which the adjusted speed is exceeded, i.e., an **occurrence**, but the cited sections of the Sigl reference simply do not teach or suggest *an affirmative recognition or detection* of a descent; instead, Sigl merely describes the effect of driving on downhill grades. Therefore, the Sigl reference cannot render obvious claim 1 of the present invention in which *a descent is detected, affirmatively recognized,* as part of the method.

The above conclusion is particularly inescapable in light of the additional feature of the present invention of "calculating at least one manipulated variable based on the actual speed and the setpoint speed *only when the vehicle is detected as traveling on the descent,*" (emphasis added) as recited in claim 1. There is no teaching or suggestion in Sigl with respect to calculating a manipulated variable *only* when a descent is detected. In fact, as noted above, there is no provision in Sigl with respect to detecting a descent, and so it is impossible for the Sigl reference to suggest calculating a variable *only* when a descent is detected. Therefore, the Sigl reference can not teach or suggest the features of the present invention as recited in claim 1. Accordingly, for the foregoing reasons, it is respectfully submitted that Sigl cannot render obvious claim 1, and it is respectfully submitted that claim 1 is allowable.

Additionally, it is respectfully submitted that there is no suggestion in the prior art to modify the Sigl reference by detecting a descent in the manner contemplated by claim 1. The Examiner asserts in the Office Action that Sigl:

> performs some functions when the vehicle is traveling on a downhill. Therefore, Sigl detects when the vehicle is traveling on a descent. It can be read between the lines.

(Office Action at page 2). However, Sigl does not indicate *detecting, i.e.,recognizing,* a descent. The fact that some functions may be performed when the vehicle is traveling on a downhill doesn't indicate that there is a recognition of the vehicle traveling downhill.

Measuring devices 20 through 22 in Sigl measure "throttle-valve position, engine temperature, engine rpm, driving speed, etc." (Col. 2, lines 63 to 64). Nowhere does Sigl indicate *a sensor for detecting a descent*, or a method for detecting a descent from the sensors provided. Rather, Sigl merely indicates driving on downhill grades as *an example* of an operating state in which the device according to Sigl *might* operate. The Office Action also asserts that "[t]he inability to maintain the set speed after the engine output is reduced is the same as detecting the vehicle traveling on a descent." (Office Action at page 2). Applicants respectfully disagree, since **detection** requires affirmative recognition of a condition, not merely that the **condition occur**, and further assert that the cited section of Sigl does not support this proposition. In fact, the cited section of Sigl does not even address the situation of not being able to maintain a set speed after reducing the engine output. Therefore, Sigl does not render obvious the subject matter of claim 1, in which a descent is *detected*. The conclusory reasoning of the Office Action suggesting the modification of the Sigl reference is insufficient to sustain an obviousness rejection, and therefore the § 103(a) rejection of claim 1 should be withdrawn.

Claim 2 depends from claim 1, and therefore claim 2 is allowable for at least the same reasons as claim 1 is allowable.

With respect to claim 8, Sigl does not teach or suggest all the limitations, and therefore does not render obvious claim 8 under 35 U.S.C. § 103(a). Claim 8 recites:

> [a] device for controlling a vehicle, comprising . . . an output arrangement via which a manipulated variable that influences the actual speed of the vehicle is output . . . wherein the control device includes an enabling arrangement for enabling only the manipulated variable to be calculated and output, respectively, *if a descent of the vehicle has been detected*; and wherein the control device includes *an arrangement for detecting the descent of the vehicle*.

(Emphasis added). As noted above with respect to a comparable feature of claim 1, Sigl does not teach or suggest the feature of "enabling only the manipulated variable to be calculated and output, respectively, *if a descent of the vehicle has been detected*," (emphasis added) as recited in claim 8. The cited sections of Sigl do not teach detecting a descent situation, and therefore Sigl cannot teach *calculating and outputting the manipulated variable only if a descent of the vehicle is detected.*

Additionally, claim 8 recites a specific structure for detecting a descent in the additional limitation that "the control device includes an arrangement for detecting the descent of the vehicle." A control device which includes an arrangement for detecting the descent of the vehicle is not taught or suggested in the Sigl reference. The discussion above arguing against the Office Action's suggestion that the device according to Sigl detects a descent, as read "between the lines," applies equally to claim 8. Since the Sigl reference does not teach or suggest all of the limitations of claim 8, it is respectfully submitted that the Sigl reference does not render obvious the subject matter of claim 8. Accordingly, it is respectfully submitted that claim 8 is allowable.

III. ALLOWABLE CLAIMS

Claims 3 to 5, 9 and 10, which have been indicated as containing allowable subject matter, have been rewritten in independent form to include the features of their rejected base claims, and are therefore allowable. Claims 6 and 7 depend from allowable claim 5, and are therefore allowable in their present form. Therefore, it is respectfully requested that claims 3 to 7, 9 and 10 be allowed.

IV. CONCLUSION

In view of all of the above, it is believed that the rejections of claims 1, 2, and 8 have been obviated, and that all of claims 1 to 10 are allowable. It is therefore respectfully requested that the rejections be withdrawn and that the present application issue as early as possible.

Respectfully submitted,

Dated: 11/26/02

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AMENDMENT VERSION WITH MARKINGS

IN THE CLAIMS:

Claims 3 to 5, 9 and 10 have been amended without prejudice as follows:

3. (Once Amended) A [The] method for controlling a vehicle, [according to claim 1 further] comprising the [step] steps of:

determining an actual speed of the vehicle;

predefining a setpoint speed;

detecting whether the vehicle is traveling on a descent;

calculating at least one manipulated variable based on the actual speed and the setpoint speed only when the vehicle is detected as traveling on the descent;

influencing the actual speed of the vehicle on the basis of the at least one manipulated variable; and

applying a brake pressure to at least one wheel brake based on a difference between the actual speed and the setpoint speed such that the actual speed is brought in line with the setpoint speed, the step of applying being performed according to one of a condition when the actual speed exceeds the setpoint speed and, if the actual speed is lower than the setpoint speed, a condition when the actual speed is approaching the setpoint speed.

4. (Once Amended) A [The] method for controlling a vehicle, [according to claim 1 further] comprising the [step] steps of:

determining an actual speed of the vehicle;

predefining a setpoint speed;

detecting whether the vehicle is traveling on a descent;

calculating at least one manipulated variable based on the actual speed and the setpoint speed only when the vehicle is detected as traveling on the descent;

influencing the actual speed of the vehicle on the basis of the at least one manipulated variable; and

AMENDMENT VERSION WITH MARKINGS

causing a tilt sensor to supply a signal, wherein the step of detecting whether the vehicle is traveling on the descent includes the step of evaluating the signal supplied by the tilt sensor.

5. (Once Amended) A [The] method for controlling a vehicle, [according to claim 1 further] comprising the steps of:

determining an actual speed of the vehicle;

predefining a setpoint speed;

detecting whether the vehicle is traveling on a descent;

calculating at least one manipulated variable based on the actual speed and the setpoint speed only when the vehicle is detected as traveling on the descent;

influencing the actual speed of the vehicle on the basis of the at least one manipulated variable;

determining an actual acceleration of the vehicle; and

calculating a model acceleration based on a driving torque[,] ; wherein [:]

the step of detecting whether the vehicle is traveling on the descent includes the step of detecting the descent only if a rate of change of the actual acceleration is positive and a difference between the actual acceleration and the model acceleration is also positive.

9. (Once Amended) A [The] device [according to claim 8, wherein:] for controlling a vehicle, comprising:

a control device for receiving a signal indicating an actual speed of the vehicle;

a memory in which a setpoint speed is predefined; and

an output arrangement via which a manipulated variable that influences the actual speed of the vehicle is output based on the actual speed and the setpoint speed in order to influence the actual speed of the vehicle; wherein

the control device includes an enabling arrangement for enabling only the manipulated variable to be calculated and output, respectively, if a descent of the vehicle has been detected;

AMENDMENT VERSION WITH MARKINGS

the control device includes an arrangement for detecting the descent of the vehicle;

the control device determines a signal representing an actual acceleration of the vehicle [,] ;

the control device includes a model for calculating a model acceleration based on a driving torque [,] ; and

the control device includes an arrangement for detecting the descent of the vehicle, the descent of the vehicle only being detected if a rate of change of the actual acceleration and a difference between the actual acceleration and the model acceleration are positive.

10. (Twice Amended) A [The] device [according to claim 8, wherein] for controlling a vehicle, comprising:

a control device for receiving a signal indicating an actual speed of the vehicle;

a memory in which a setpoint speed is predefined; and

an output arrangement via which a manipulated variable that influences the actual speed of the vehicle is output based on the actual speed and the setpoint speed in order to influence the actual speed of the vehicle; wherein

the control device includes an enabling arrangement for enabling only the manipulated variable to be calculated and output, respectively, if a descent of the vehicle has been detected;

the control device includes an arrangement for detecting the descent of the vehicle; and

the descent of the vehicle is only detected if a tilt sensor supplies a signal indicating the descent.